

Periodontal Disease, Bad Breath, and Systemic Health

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Through the years I have come to realize that attaining and maintaining physical health can be a very complex matter, and that goes for periodontal health as well. Proper bodily conditioning with improved health in mind starts out with a proper assessment of current health parameters based upon blood and urine tests for mineral imbalances, nutritional deficiencies, possible allergies etc., and a program designed with goals established of improved parameters metered by subjective and objective re-assessments.

It is becoming more recognized that the state of health of the gums and bony supportive foundation of the teeth is a gauge of a person's general health, and that a reciprocal relationship also exists, in that the health of the gums can affect the state of one's general health as well. Understanding this, a health-centered approach to dealing with gum disease can involve more than the mechanical removal of bacterial plaque and calculus, as important as these procedures are. The mouth is an organ that is the entry point of the digestive system. One can no more have optimum periodontal health if the body's health is compromised any more than one would have an unhealthy heart, liver or kidneys within an environment of optimum general health.

The difference between a health-centered and traditional, mechanical approach to periodontal health begins with a basic conceptualization of this difference which reflects itself in its assessment, diagnosis and treatment. Traditional periodontal disease assessment is solely mechanistic based upon measuring sulcus/pocket depths and amount and type of bleeding that may ensue from the measuring process. Bacterial plaque colonization and subsequent calculus formation are recognized as primary etiological factors in the local inflammatory process, and treatment procedures are based upon the mechanical removal of plaque and calculus via periodic cleanings, deep cleanings and surgical procedures to gain access to calculus in damaged areas. Preventive measures center around antibacterial rinses and "OHI," or Oral Health Instructions, which I've found to be quite farcical as to how this important element of periodontal health is approached.

Most all dentists and their Dental Associations and Academies proclaim that patient education is all-important in developing oral health. The rub is that dentists are not selected for dental school based upon any iota of innate teaching ability, and any desire to do so seems to lie within the inherent value system of the individual dentist or hygienist. Oral Health Instructions may or may not involve behavioral change. Ben Franklin said: "Tell me and I'll forget; Show me and I'll remember; Involve me and I'll learn." This apt saying and its relevance to actual learning and effective behavioral change required for health development is demonstrated well by a question I ask at my oral health presentations. At an appropriate time, I ask the audience – which can range from an audience size of 12 to over 300 - "How many of you have ever had a dentist or hygienist have you demonstrate to them how you take care of your teeth and gums?" Rarely does a hand go up – maybe one or two with larger audiences. Ask any dentist if most of their patients do an optimum job of daily self care and an honest answer would be "NO." They have never really been taught! Part of the reason is that insurance based dentistry

excludes preventive teaching benefits, and its fee structure disregards the uniqueness of each person's condition. This fosters hygienist time relegated to "cleaning teeth," rather than coaching for patient enlightenment and effective skill learning.

So, periodontal health care in most traditional dental practices is jinxed because of the above, but compounding it more, the increasing realization of the oral-systemic connection places a much larger responsibility on the dental office to not only clean teeth, but to foster a relationship based educational process with its patients, leading to co-developed goals resulting in optimum periodontal health.

An unhealthy bacterial environment in the mouth can harbor pathogens that leak into the blood stream and influence one's general health. Also, the inflammation from periodontal disease can dramatically increase the inflammatory burden of the entire body which has an influence on many diseases such as diabetes, heart disease and strokes. The reciprocal relationship between oral health and systemic disease is definitely becoming more established. Sir William Osler, described as the "Father of Modern Medicine" is quoted as saying, "The mouth is the mirror to the overall health of the body." The health of the body can both influence and be influenced by the health of the mouth. For example, various groups of spirochetes have been problematic over the ages and are responsible for syphilis and Lyme disease. We now have information that oral spirochetes are present in the brains of many Alzheimer's patients. Could these pathogenic bacteria cause dementia? Another example: The March, 2013 edition of the American Heart Association journal *Circulation* cites groundbreaking research showing the direct connection between oral pathogens (associated with periodontal disease and tooth decay) and acute heart attacks. It tells us that as many as half of heart attacks are being triggered by oral pathogens. **Oral bacteria were found in every thrombus, and 30% had live oral pathogens in the clot!**

A health-centered approach to periodontal disease realizes this increasing degree of responsibility placed onto the hygiene arm of a dental practice in education, prevention and treatment. I became aware of the differences in patients' oral environments decades ago when I started using phase microscopy as a means of discovering the relative health of a patient's plaque which directly relates to the state of their periodontal disease. It also became a learning opportunity for both doctor and patient as well as a motivating opportunity for the patient. It is still a wonderment to behold the reaction as both children and adults see the actual bacteria that live in a tiny speck of their plaque. I discovered back then that no two plaque samples were alike, and through the years having added other assessments that show even more the uniqueness of oral bacteria from patient to patient, it became it is apparent that the individuality of the periodontal condition as it is definitely not a singular disease.

We are pleased and excited to announce that the Dental Wellness Center now has an effective solution for bad breath, while at the same time improving the health of the oral environment. While the phase contrast microscope helps in determining the relative virulence of the bacteria residing within a patient's plaque, it is not able to discern all of the bad guys from the good guys. Hence, our treatment protocols, although somewhat

effective, were basically a shotgun approach. With the advent of our new Oravital protocol, we now have the capability to analyze the entire oral environment through an array of assessments, including taking biofilm samples of all areas within the mouth which are sent to a laboratory for analysis. The results allow us to offer effective solutions for bad breath along with controlling periodontal disease by dealing with the specific bacterial population that exists in each patient's mouth. Now, that's a real breakthrough!

A health-centered dental practice realizes the uniqueness of each patient's state of oral health and utilizes diagnostic tools to define that uniqueness. These tools let the clinician have the needed information to deal with periodontal disease in a manner that is specific to the individual with predictable long-term outcomes – a far cry from “cleaning teeth.”